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SEQUENCE LISTING

## RECEIVED

MAY 3 1 2001

TEUR DENIER 1600/2900

<110> Kawakami, Akira

Terami, Fumihird

<120> LOW TEMPERATURE EXPRESSION CHITINASE CDNAs AND METHOD FOR ISOLATING THE SAME

<130> 107156-00004

<140> US 09/534,229

<141> 2000-03-24

<160> 8

<170> PatentIn version 3.0

<210> 1

<211> 256

<212> PRT

<213> Triticum aestivum

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Thr Arg Ser Val Tyr Ala Ser Met Leu Pro Asn Arg Asp Asn Ser Leu 35 40

Cys Pro Ala Arg Gly Phe Tyr Thr Tyr Asp Ala Phe Ile Ala Ala Ala 50 55 60

; .

Asn Thr Phe Pro Gly Phe Gly Thr Thr Gly Ser Ala Asp Asp Ile Lys 70 75 80

Arg Asp Leu Ala Ala Phe Phe Gly Gln Thr Ser His Glu Thr Thr Gly 85 90 95

Gly Thr Arg Gly Ala Ala Asp Gln Phe Gln Trp Gly Tyr Cys Phe Lys 100 105 110

Glu Glu Ile Ser Lys Ala Thr Ser Pro Pro Tyr Tyr Gly Arg Gly Pro 115 120 125

Ile Gln Leu Thr Gly Arg Ser Asn Tyr Asp Leu Ala Gly Arg Ala Ile 130. 135 140

Gly Lys Asp Leu Val Ser Asn Pro Asp Leu Val Ser Thr Asp Ala Val 145 150 155 160

Val Ser Phe Arg Thr Ala Met Trp Phe Trp Met Thr Ala Gln Gly Asn 165 170 175

Lys Pro Ser Cys His Asn Val Ala Leu Arg Arg Trp Thr Pro Thr Ala 180 185 190

Ala Asp Thr Ala Ala Gly Arg Val Pro Gly Tyr Gly Val Ile Thr Asn 195 200 205

Ile Ile Asn Gly Gly Leu Glu Cys Gly Met Gly Arg Asn Asp Ala Asn 210 215 220

Val Asp Arg Ile Gly Tyr Tyr Thr Arg Tyr Cys Gly Met Leu Gly Thr 225 230 235 240

Ala Thr Gly Gly Asn Leu Asp Cys Tyr Thr Gln Arg Asn Phe Ala Ser 245 250 255

<210> 2

<211> 323

<212> PRT

<213> Triticum aestivum

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Gln Ala Gly Gly Ala Lys Cys Ala Asp Cys Leu Cys Cys Ser Gln Phe 35 40 45

Gly Phe Cys Gly Thr Thr Ser Asp Tyr Cys Gly Pro Arg Cys Gln Ser Gln Cys Thr Gly Cys Gly Gly Gly Gly Gly Val Ala Ser Ile Val Ser Arg Asp Leu Phe Glu Arg Phe Leu Leu His Arg Asn Asp Ala Ala Cys Leu Ala Arg Gly Phe Tyr Thr Tyr Asp Ala Phe Leu Ala Ala Ala Gly Ala Phe Pro Ala Phe Gly Thr Thr Gly Asp Leu Asp Thr Arg Lys 120 Arg Glu Val Ala Ala Phe Phe Gly Gln Thr Ser His Glu Thr Thr Gly Gly Trp Pro Thr Ala Pro Asp Gly Pro Phe Ser Trp Gly Tyr Cys Phe 150 Lys Gln Glu Gln Gly Ser Pro Pro Ser Tyr Cys Asp Gln Ser Ala Asp 170 165 Trp Pro Cys Ala Pro Gly Lys Gln Tyr Tyr Gly Arg Gly Pro Ile Gln Leu Thr His Asn Tyr Asn Tyr Gly Pro Ala Gly Arg Ala Ile Gly Val Asp Leu Leu Asn Asn Pro Asp Leu Val Ala Thr Asp Pro Thr Val Ala 21Ò 215 220 Phe Lys Thr Ala Ile Trp Phe Trp Met Thr Thr Gln Ser Asn Lys Pro 235 230 Ser Cys His Asp Val Ile Thr Gly Leu Trp Thr Pro Thr Ala Arg Asp 250 Ser Ala Ala Gly Arg Val Pro Gly Tyr Gly Val Ile Thr Asn Val Ile Asn Gly Gly Ile Glu Cys Gly Met Gly Gln Asn Asp Lys Val Ala Asp

Arg Ile Gly Phe Tyr Lys Arg Tyr Cys Asp Ile Phe Gly Ile Gly Tyr

Gly Asn Asn Leu Asp Cys Tyr Asn Gln Leu Ser Phe Asn Val Gly Leu

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Ala Ala Gln

305

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<211> 319

<212> PRT

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Asp Tyr Cys Gly Thr Gly Cys Gln Ser Gln Cys Asn Gly Cys Ser Gly 50 55 60

Gly Thr Pro Val Pro Val Pro Thr Pro Ser Gly Gly Gly Val Ser Ser 65 70 75 80

Ile Ile Ser Gln Ser Leu Phe Asp Gln Met Leu Leu His Arg Asn Asp 85 90 95

Ala Ala Cys Leu Ala Lys Gly Phe Tyr Asn Tyr Gly Ala Phe Val Ala 100 105 110

Ala Ala Asn Ser Phe Ser Gly Phe Ala Thr Thr Gly Ser Thr Asp Val

Lys Lys Arg Glu Val Ala Ala Phe Leu Ala Gln Thr Ser His Glu Thr 130 135 140

Thr Gly Gly Trp Pro Thr Ala Pro Asp Gly Pro Tyr Ser Trp Gly Tyr 145 150 155 160

Cys Phe Asn Gln Glu Arg Gly Ala Thr Ser Asp Tyr Cys Thr Pro Ser 165 170 175

Ser Gln Trp Pro Cys Ala Pro Gly Lys Lys Tyr Phe Gly Arg Gly Pro 180 185 190

Ile Gln Ile Ser His Asn Tyr Asn Tyr Gly Pro Ala Gly Gln Ala Ile 195 200 205

Gly Thr Asp Leu Leu Asn Asn Pro Asp Leu Val Ala Ser Asp Ala Thr 210 215 220

Val Ser Phe Lys Thr Ala Leu Trp Phe Trp Met Thr Pro Gln Ser Pro 225 230 235 240

Lys Pro Ser Ser His Asp Val Ile Thr Gly Arg Trp Ser Pro Ser Gly 245 250 255

Ala Asp Gln Ala Ala Gly Arg Val Pro Gly Tyr Gly Val Ile Thr Asn 260 265 270

Ile Ile Asn Gly Gly Leu Glu Cys Gly Arg Gly Gln Asp Gly Arg Val 275 280 285

Ala Asp Arg Ile Gly Phe Tyr Lys Arg Tyr Cys Asp Leu Leu Gly Val 290 295 300

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<211> 23

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<213> Artificial/Unknown

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<211> 20

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<211> 972

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gggttctaca	cgtacgacgc	cttcttggcc	gccgccggcg	cgttcccggc	cttcggcacc	360
accggagacc	tggacacgcg	gaagcgggag	gtggcggcct	tcttcggcca	gacctctcac	420
gagaccaccg	gcgggtggcc	caccgcgccc	gacggcccct	tctcatgggg	ctactgcttc	480
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ccgacagtgg	cgttcaagac	ggcgatatgg	ttctggatga	cgacgcagtc	caacaagccg	720
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BI
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<211> 9\60

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<213> Triticum aestivum

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<221> misc\_feature

<222> (1)..(960)

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<400> 8

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Luly Cont